REMARKS

The Examiner's attention to the present application is greatly appreciated.

The Examiner has rejected the drawings as failing the comply with 37 C.F.R. § 1.84(p)(4). The specification was objected to as incorrectly reflecting that the application is a continuation application, instead of its proper designation as a continuation-in-part.

In addition, Claims 1 and 2 were rejected under 35 U.S.C. § 102. Meanwhile, Claims 3 - 6 were rejected under 35 U.S.C. § 103.

Entry of the amendments is respectfully requested. The amendments have been made to narrow the scope of the claims to reflect that the claims are directed to a computer keyboard upon which one types, as opposed to a keypad. Support can be found throughout the specification and drawings of the present application. Claims 1 - 6 were canceled by this amendment. Meanwhile, Claims 7 - 9 have been added by this amendment. Reexamination, reconsideration and allowance of the claims of this application is respectfully requested.

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SPECIFICATION

The specification has been amended above to correctly reflect that the present application is a continuation-in-part application.

DRAWINGS

The drawings were objected to because reference character "15" was incorrectly used to designate both the upper clamshell member and the entire key cap, particularly in Figs. 7 and 8. In addition, reference character "13" was used to incorrectly designate both the keyboard housing and the key shafts in Figs. 7 and 8.

Applicant will submit contemporaneously with the formal filing of this response a Request To Correct Drawings Pursuant to 37 C.F.R. §§ 1.85 and 1.123 with substitute drawings. These drawings incorporate the changes requested by the Examiner.

REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103

In the Office Action of October 18, 2000, Claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Krupnik* (U.S. Patent No. 4,806,908). Claims 3 - 6 were rejected under 35 U.S.C. § 103 as being unpatentable over *Krupnik* in view of *Brown* (U.S. Patent No. 4,320,268), *LaPointe, et al.* (U.S. Patent No. 5,797,482), and

DeSmet (U.S. Patent No. 4,811,175). Moreover, Claims 3 and 4 were rejected under 35 U.S.C. § 103 as being unpatentable over *Krupnik* and further in view of *Brown*. Furthermore, Claim 5 was rejected under 35 U.S.C. § 103 as being unpatentable over *Krupnik*, in view of *Brown*, and further in view of *LaPointe et al.* Finally, Claim 6 was rejected under 35 U.S.C. § 103 as being unpatentable over *Krupnik* in view of *DeSmet*, and further in view of *Brown*.

Krupnik (U.S. Patent No. 4,806,908)

This reference is directed to a keypad having translucent keys. Each key includes a key shaft having a bore with the bores longitudinally aligned so that an electroluminescent strip can project longitudinally through the bores of the key shafts to illuminate the key members.

Krupnik does not suggest that the structure could be employed in a computer keyboard. Moreover, *Krupnik* does not describe the construction claimed by Applicant including a biasing means positioned below the key members and above the circuit board for biasing the key member in the upward direction.

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Brown (U.S. Patent No. 4,320,268)

This reference describes a keypad including an illuminescent panel underlying the numerical displaying key members. The key members include a shaft which projects through holes formed in the illuminescent panel so that the key shafts may directly engage a circuit board.

Again, there is no suggestion that the *Brown* construction could be employed in a computer keyboard for typing. Instead, *Brown* describes the invention for use in connection with electronic appliances such as calculators, telephones or controls. Moreover, the *Brown* construction does not include an elastic diaphragm positioned below the key members for biasing the key members upwardly as claimed by Applicant.

LaPointe et al. (U.S. Patent No. 5,797,482)

This reference is directed to a keypad for controlling a VCR. The keypad includes an electroluminescent sheet for backlighting the keys. The keys are soft and resilient in the form of a membrane. Underlying the membrane keys is an electroluminescent panel followed by electrodes forming what could be considered a circuit board.

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LaPointe et al. does not suggest that the construction could be employed in a typewriter-type keyboard. Moreover, the *LaPointe et al.* construction does not describe the use of substantially hard nondeformable keys which are depressable, nor the use of an elastic diaphragm for biasing the keys upwardly.

DeSmet (U.S. Patent No. 4,811,175)

This reference describes a membrane keyboard or other microtravel switch array. The keys are deformable for engaging a circuit board and illuminated by a light source such as LEDs.

Everett, Jr. (U.S. Patent No.4,060,703)

This reference was not cited within the Examiner's Office Action, but instead was cited in a patent search conducted in connection with Applicant's PCT patent application.

This reference also describes a membrane keypad. The keys are deformable and illuminated by an electro luminescent panel.

Bartley et al. (U.S. Patent No. 5,491,313)

This reference was also uncovered in connection with Applicant's PCT patent application.

This reference describes a keypad for use in connection with automobile audio systems. The keys are elastic, and thus deformable, for completing the circuit of a circuit board. Underlying the circuit board is a light pipe.

APPLICANT'S CLAIMED INVENTION

Applicant's claimed invention is directed to a conventional keyboard, as opposed to a keypad, including illuminated keys. The keys are depressable within the keyboard's housing and constructed of a substantially hard nondeformable material. Claims 7 - 9 are each directed to a different particular embodiment of Applicant's claimed invention.

Claim 7

Claim 7 is directed to the embodiment reflected in Figs. 6 and 7 of the application, as shown below.

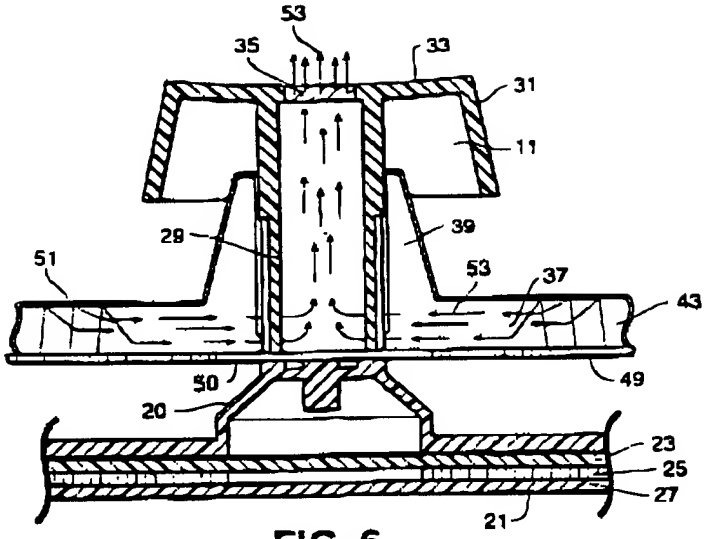
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FIG. 6

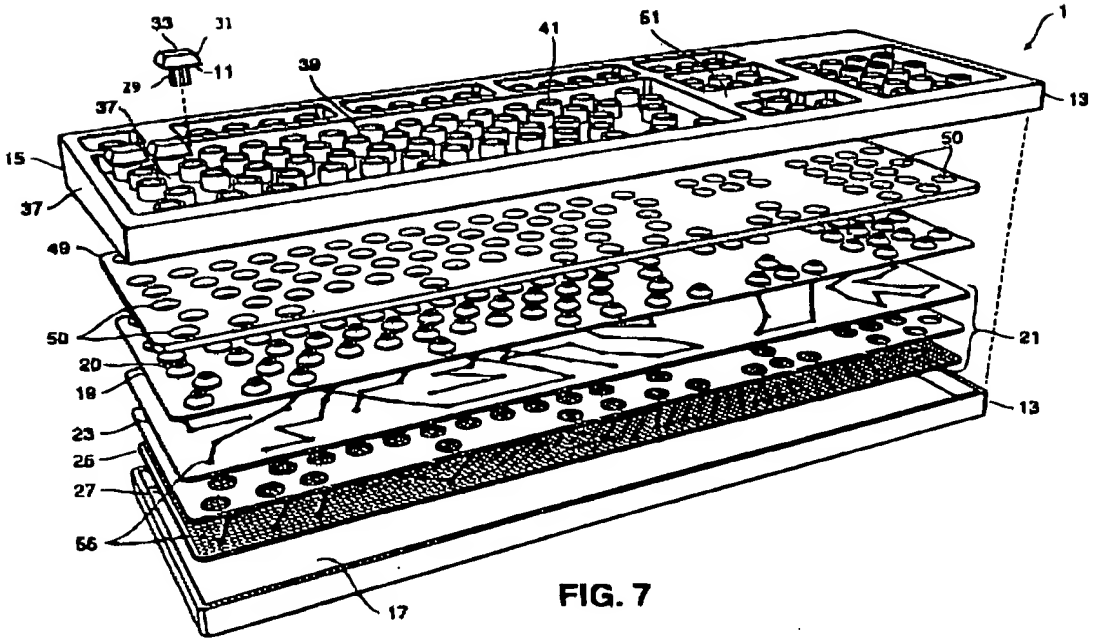
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FIG. 7

As shown in the figure, underlying the key members are an elastic diaphragm and circuit board. Positioned above the elastic diaphragm is a luminescent panel 49 including a plurality of holes enabling the shaft of the key member to project therethrough.

None of the prior art cited by the Examiner disclose or suggest constructions for use in connection with a keyboard used for typing. Instead, each of these references is directed to illuminated panels for keypads. More importantly, even if one were to use the constructions of the keypad switches described in the prior art cited by the Examiner, one would not produce Applicant's claimed invention. Turning to the prior art cited by the Examiner, *DeSmet*, *LaPointe et al.*, *Bartley et al.* and *Everett, Jr.* all describe keypads including membrane switches utilizing deformable keys. None of these references teach a keyboard including hard nondeformable keys or an elastic diaphragm for biasing the keys upwardly for there is no reason to have a biasing means for these constructions. Meanwhile, neither *Brown* nor *Krupnik* describe a keyboard including an elastic membrane underlying the key members for biasing the keys upwardly separate from the circuit board itself. For example, as best shown in Fig. 2 of *Brown*, the key members are forced upwardly only by the inherent properties of the upper surface, dome, of the circuit board. Thus, even if one were motivated to use the constructions or *Brown* or *Krupnik* for a typewriter-type keyboard, one would not be provided with the construction claimed by Applicant. Instead, one would be provided with a keyboard having the feel of a keypad, as the keys would have little, if any, travel.

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Claim 8

New Claim 8 is directed to the embodiment best shown in Fig. 10 of the application as provided below.

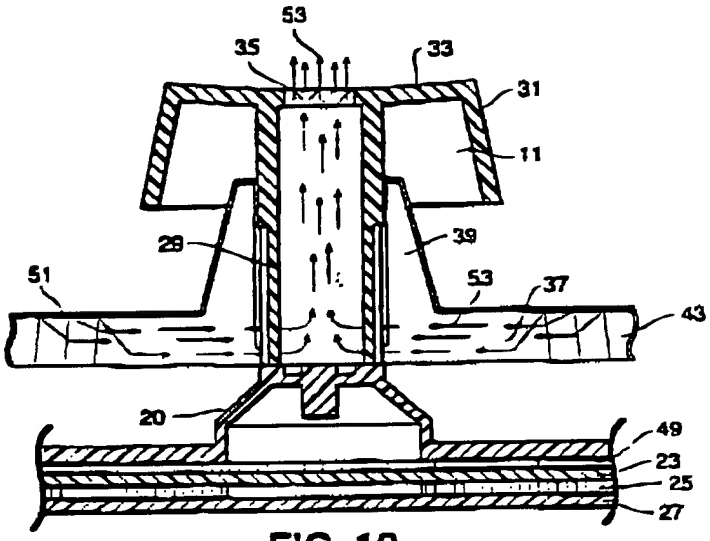

FIG. 10

Underlying the key members of the computer keyboard are an elastic diaphragm, luminescent panel 49 and circuit board comprised of layers 23, 25 and 27. The elastic diaphragm is constructed of a translucent material so that light emitted from the luminescent panel will project upwardly through the elastic diaphragm to the key member.

Without even addressing the issue that the prior art does not suggest utilizing a luminescent panel in connection with a computer keyboard, the prior art does not suggest the combination of a luminescent panel underlying a translucent elastic diaphragm for biasing substantially hard nondeformable key members in the upward direction.

Claim 9

Claim 9 is directed to the embodiment of Applicant's best shown in Figs. 8 and 9 as shown below.

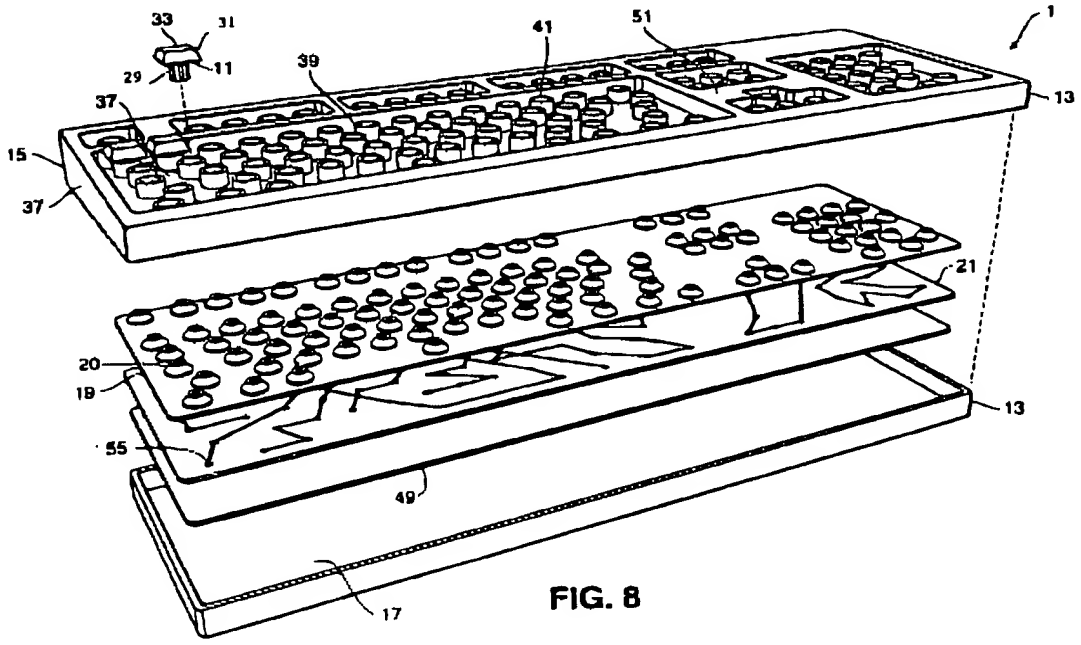

FIG. 8

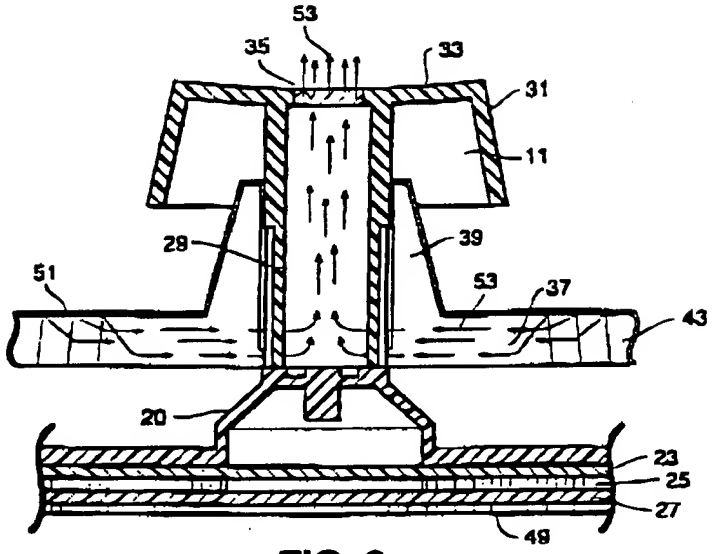

FIG. 9

The computer keyboard of this embodiment includes both a substantially translucent elastic diaphragm and a substantially translucent circuit board. Underlying both the elastic diaphragm and the circuit board is a luminescent panel which projects light upwardly through the circuit board and the elastic diaphragm to illuminate the key members.

Again, aside from the fact that the prior art does not suggest the use of a luminescent panel in connection with a typewriter-type keyboard as claimed by Applicant, the prior art does not suggest a construction wherein a luminescent panel underlies both a translucent circuit board and a translucent elastic membrane which biases substantially hard nondeformable key members in the upward direction.

CONCLUSION

Applicant has significantly narrowed the scope of the claims so that the claimed invention is directed to a typewriter-type keyboard as opposed to a keypad. This amendment was made by clarifying that the keyboard includes at least twenty-six keys having letters displayed thereon. Because none of the prior art suggests the use of a luminescent panel for illuminating the keys of a typewriter-type keyboard, the claims in this case, Claims 7 - 9, are believed allowable. Moreover, the prior art does not describe or suggest the very narrow constructions claimed by Applicant, even for use in connection with keypads. Therefore, it is believed that the claims now in this case, Claims 7 - 9, are in condition for allowance and notice thereof is respectfully solicited.

Respectfully submitted,

DRUMMOND & DUCKWORTH

David G. Duckworth
Registration No. 39,516
Attorney for Applicant
Telephone: (949) 724-1255

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